

Family Law Effects on Divorce, Fertility and Child Investment

Meta Brown, Christopher Flinn & Joseph Mullins

September 21, 2016

Goal of the Paper

Goal of the Paper

- ▶ How do policies affecting marital dissolution influence child outcomes?

Goal of the Paper

- ▶ How do policies affecting marital dissolution influence child outcomes?
 - ▶ Divorce standards: bilateral vs unilateral
 - ▶ Child support
 - ▶ Custody allocation

Goal of the Paper

- ▶ How do policies affecting marital dissolution influence child outcomes?
 - ▶ Divorce standards: bilateral vs unilateral
 - ▶ Child support
 - ▶ Custody allocation
- ▶ What laws should we implement to best serve kids?

Goal of the Paper

- ▶ How do policies affecting marital dissolution influence child outcomes?
 - ▶ Divorce standards: bilateral vs unilateral
 - ▶ Child support
 - ▶ Custody allocation
- ▶ What laws should we implement to best serve kids?
- ▶ Competing causal processes: marriage quality vs resources

Goal of the Paper

- ▶ How do policies affecting marital dissolution influence child outcomes?
 - ▶ Divorce standards: bilateral vs unilateral
 - ▶ Child support
 - ▶ Custody allocation
- ▶ What laws should we implement to best serve kids?
- ▶ Competing causal processes: marriage quality vs resources
- ▶ What are the welfare consequences of changes to family law?

Previous Work

Changes in Divorce Law

Nixon (1997), Friedberg (1998), Wolfers (2006), Piketty (2003), Gruber (2004), Aizer & McLanahan (2006)

Modeling Marriage Dynamics

Brien, Lillard & Stern (2006), Aiyagari, Greenwood & Guner (2000), Chiappori, Fortin & Lacroix (2002)

Parental Investment and Child Outcomes

Tartari (2014), Del Boca, Flinn & Wiswall (2014)

[This paper](#): modeling parental investment and child outcomes in an articulated policy environment.

What we do

We specify and estimate a quantitative model:

What we do

We specify and estimate a quantitative model:

- ▶ Parents endogenously choose:
 - ▶ Fertility
 - ▶ Divorce
 - ▶ Time investments in child

What we do

We specify and estimate a quantitative model:

- ▶ Parents endogenously choose:
 - ▶ Fertility
 - ▶ Divorce
 - ▶ Time investments in child
- ▶ Production technology:
{Marriage Quality, Investment} \mapsto Child Outcomes

What we do

We specify and estimate a quantitative model:

- ▶ Parents endogenously choose:
 - ▶ Fertility
 - ▶ Divorce
 - ▶ Time investments in child
- ▶ Production technology:
{Marriage Quality, Investment} \mapsto Child Outcomes
- ▶ Noncooperative framework (dynamic game).

What we do

We specify and estimate a quantitative model:

- ▶ Parents endogenously choose:
 - ▶ Fertility
 - ▶ Divorce
 - ▶ Time investments in child
- ▶ Production technology:
{Marriage Quality, Investment} \mapsto Child Outcomes
- ▶ Noncooperative framework (dynamic game).

We use this framework for policy analysis.

Findings

Findings

- ▶ Decline in marriage quality: influential in determining “negative impacts of divorce”.

Findings

- ▶ Decline in marriage quality: influential in determining “negative impacts of divorce”.
- ▶ Policies cannot be evaluated solely on whether they encourage or discourage dissolution.

Findings

- ▶ Decline in marriage quality: influential in determining “negative impacts of divorce”.
- ▶ Policies cannot be evaluated solely on whether they encourage or discourage dissolution.
- ▶ Rather, we must ask: *who* is affected by particular policies?

Findings

- ▶ Decline in marriage quality: influential in determining “negative impacts of divorce”.
- ▶ Policies cannot be evaluated solely on whether they encourage or discourage dissolution.
- ▶ Rather, we must ask: *who* is affected by particular policies?
- ▶ The move from bilateral to unilateral divorce standard was good for kids.

Data

- ▶ PSID + CDS (time diaries)
- ▶ 4398 Marriages [1975-1996]
- ▶ 1295 Kids (from CDS)
- ▶ 689 Divorces (286 with kids)

Test Scores and Divorce

Test Scores and Divorce

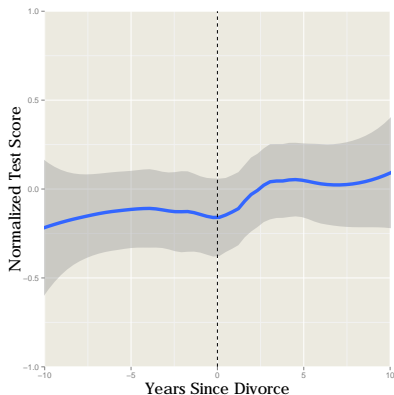


Figure : Normalized Test Scores by Years Since Divorce. The graph displays the locally smoothed mean with 95% pointwise confidence intervals.

Test Scores and Divorce

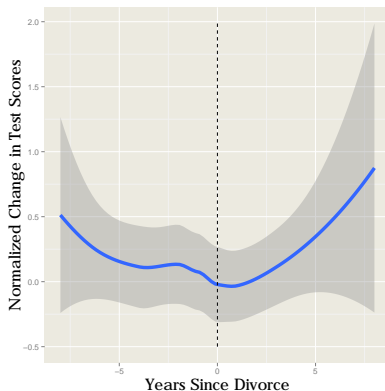


Figure : Normalized Growth in Test Scores by Years Since Divorce. The graph displays the locally smoothed mean with 95% pointwise confidence intervals.

Time Investment and Divorce

Time Investment and Divorce

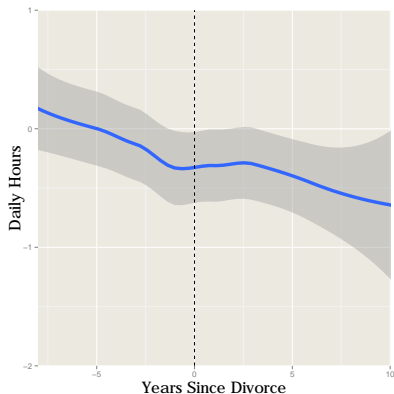


Figure : Mother's Normalized Time Input by Years Since Divorce. The graph displays the locally smoothed mean with 95% pointwise confidence intervals.

Time Investment and Divorce

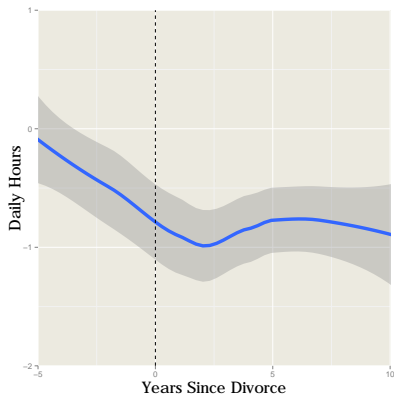


Figure : Father's Normalized Time Input by Years Since Divorce. The graph displays the locally smoothed mean with 95% pointwise confidence intervals.

Basic Features

Basic Features

- ▶ Two-decision making agents: (1) Husband & (2) Wife.
- ▶ Discrete time: $t = 0, 1, 2, \dots$
- ▶ Decisions: labor supply, fertility, marital dissolution, time investment with child.
- ▶ Child matures at age M .

Basic Features

- ▶ Two-decision making agents: (1) Husband & (2) Wife.
- ▶ Discrete time: $t = 0, 1, 2, \dots$
- ▶ Decisions: labor supply, fertility, marital dissolution, time investment with child.
- ▶ Child matures at age M .
- ▶ State variables:

Basic Features

- ▶ Two-decision making agents: (1) Husband & (2) Wife.
- ▶ Discrete time: $t = 0, 1, 2, \dots$
- ▶ Decisions: labor supply, fertility, marital dissolution, time investment with child.
- ▶ Child matures at age M .
- ▶ State variables:
 - ▶ Wages: $(w_1, w_2) \in \mathcal{W}_1 \times \mathcal{W}_2$ (Markov)

Basic Features

- ▶ Two-decision making agents: (1) Husband & (2) Wife.
- ▶ Discrete time: $t = 0, 1, 2, \dots$
- ▶ Decisions: labor supply, fertility, marital dissolution, time investment with child.
- ▶ Child matures at age M .
- ▶ State variables:
 - ▶ Wages: $(w_1, w_2) \in \mathcal{W}_1 \times \mathcal{W}_2$ (Markov)
 - ▶ Marital state: $\theta \in \{\emptyset\} \cup \Theta$ (Markov)

Basic Features

- ▶ Two-decision making agents: (1) Husband & (2) Wife.
- ▶ Discrete time: $t = 0, 1, 2, \dots$
- ▶ Decisions: labor supply, fertility, marital dissolution, time investment with child.
- ▶ Child matures at age M .
- ▶ State variables:
 - ▶ Wages: $(w_1, w_2) \in \mathcal{W}_1 \times \mathcal{W}_2$ (Markov)
 - ▶ Marital state: $\theta \in \{\emptyset\} \cup \Theta$ (Markov)
 - ▶ Age of child, $a \in \{\emptyset, 0, 1, \dots, M\}$

Basic Features

- ▶ Two-decision making agents: (1) Husband & (2) Wife.
- ▶ Discrete time: $t = 0, 1, 2, \dots$
- ▶ Decisions: labor supply, fertility, marital dissolution, time investment with child.
- ▶ Child matures at age M .
- ▶ State variables:
 - ▶ Wages: $(w_1, w_2) \in \mathcal{W}_1 \times \mathcal{W}_2$ (Markov)
 - ▶ Marital state: $\theta \in \{\emptyset\} \cup \Theta$ (Markov)
 - ▶ Age of child, $a \in \{\emptyset, 0, 1, \dots, M\}$
 - ▶ “Quality” of child, $k \in \{\emptyset\} \cup \mathbb{R}^+$ (Production Function)

Basic Features

- ▶ Two-decision making agents: (1) Husband & (2) Wife.
- ▶ Discrete time: $t = 0, 1, 2, \dots$
- ▶ Decisions: labor supply, fertility, marital dissolution, time investment with child.
- ▶ Child matures at age M .
- ▶ State variables:
 - ▶ Wages: $(w_1, w_2) \in \mathcal{W}_1 \times \mathcal{W}_2$ (Markov)
 - ▶ Marital state: $\theta \in \{\emptyset\} \cup \Theta$ (Markov)
 - ▶ Age of child, $a \in \{\emptyset, 0, 1, \dots, M\}$
 - ▶ “Quality” of child, $k \in \{\emptyset\} \cup \mathbb{R}^+$ (Production Function)

Basic Features

- ▶ Two-decision making agents: (1) Husband & (2) Wife.
- ▶ Discrete time: $t = 0, 1, 2, \dots$
- ▶ Decisions: labor supply, fertility, marital dissolution, time investment with child.
- ▶ Child matures at age M .
- ▶ State variables:
 - ▶ Wages: $(w_1, w_2) \in \mathcal{W}_1 \times \mathcal{W}_2$ (Markov)
 - ▶ Marital state: $\theta \in \{\emptyset\} \cup \Theta$ (Markov)
 - ▶ Age of child, $a \in \{\emptyset, 0, 1, \dots, M\}$
 - ▶ “Quality” of child, $k \in \{\emptyset\} \cup \mathbb{R}^+$ (Production Function)
- ▶ Utility shocks (iid):
 - ▶ ϵ_θ (Marriage)
 - ▶ ζ (Fertility)

Stages of Model

- ▶ ⟨Married, No Child⟩

Stages of Model

- ▶ $\langle \text{Married, No Child} \rangle \mapsto \langle \text{Married, Child 0} \rangle$ or $\langle \text{Divorced, No Child} \rangle (T)$

Stages of Model

- ▶ $\langle \text{Married, No Child} \rangle \mapsto \langle \text{Married, Child } 0 \rangle$ or $\langle \text{Divorced, No Child} \rangle (T)$
- ▶ $\langle \text{Married, Child } a \rangle$

Stages of Model

- ▶ $\langle \text{Married, No Child} \rangle \mapsto \langle \text{Married, Child } 0 \rangle$ or $\langle \text{Divorced, No Child} \rangle (T)$
- ▶ $\langle \text{Married, Child } a \rangle \mapsto \langle \text{Divorced, Child } a + 1 \rangle$ or $\langle \text{Married, } a + 1 \rangle$

Stages of Model

- ▶ $\langle \text{Married, No Child} \rangle \mapsto \langle \text{Married, Child } 0 \rangle$ or $\langle \text{Divorced, No Child} \rangle (T)$
- ▶ $\langle \text{Married, Child } a \rangle \mapsto \langle \text{Divorced, Child } a + 1 \rangle$ or $\langle \text{Married, } a + 1 \rangle$
- ▶ $\langle \text{Married, Child } M \rangle$

Stages of Model

- ▶ $\langle \text{Married, No Child} \rangle \mapsto \langle \text{Married, Child } 0 \rangle$ or $\langle \text{Divorced, No Child} \rangle (T)$
- ▶ $\langle \text{Married, Child } a \rangle \mapsto \langle \text{Divorced, Child } a + 1 \rangle$ or $\langle \text{Married, } a + 1 \rangle$
- ▶ $\langle \text{Married, Child } M \rangle \mapsto \langle \text{Divorced, Child } M \rangle (T)$

Stages of Model

- ▶ $\langle \text{Married, No Child} \rangle \mapsto \langle \text{Married, Child } 0 \rangle$ or $\langle \text{Divorced, No Child} \rangle (T)$
- ▶ $\langle \text{Married, Child } a \rangle \mapsto \langle \text{Divorced, Child } a + 1 \rangle$ or $\langle \text{Married, } a + 1 \rangle$
- ▶ $\langle \text{Married, Child } M \rangle \mapsto \langle \text{Divorced, Child } M \rangle (T)$

Divorced, No Child

$$x = \{w_1, w_2, \emptyset, \emptyset, \emptyset\}.$$

Divorced, No Child

$$x = \{w_1, w_2, \emptyset, \emptyset, \emptyset\}.$$

$$V(x) = \max_{h_s} \{u_s(c_s, l_s) + \beta \mathbb{E}_{\hat{x}|x} V(\hat{x})\} \quad (1)$$

$$u_s(c_s, l_s) = \alpha_{1s} \log(c_s) + \alpha_{2s} \log(l_s) \quad (2)$$

$$c_s = w_s h_s \quad (3)$$

$$l_s + h_s = 1 \quad (4)$$

$$\hat{x} = \{\hat{w}_1, \hat{w}_2, \emptyset, \emptyset, \emptyset\} \quad (5)$$

Divorced, Mature Child

$$x = \{w_1, w_2, \emptyset, M, k\}:$$

Divorced, Mature Child

$$x = \{w_1, w_2, \emptyset, M, k\}:$$

$$V_S(x, \zeta) = \max_{h_S} \left\{ u_S(c_S, l_S, k) + \zeta + \beta \mathbb{E}_{\hat{\zeta}, \hat{x}|x} V_S(\hat{x}, \hat{\zeta}) \right\}$$

$$u_S(c_S, l_S, k) = \alpha_{1S} \log(c_S) + \alpha_{2S} \log(l_S) + \alpha_{3S} \log(k)$$

Divorced, Mature Child

$$x = \{w_1, w_2, \emptyset, M, k\}:$$

$$V_S(x, \zeta) = \max_{h_S} \left\{ u_S(c_S, l_S, k) + \zeta + \beta \mathbb{E}_{\hat{\zeta}, \hat{x}|x} V_S(\hat{x}, \hat{\zeta}) \right\}$$

$$u_S(c_S, l_S, k) = \alpha_{1S} \log(c_S) + \alpha_{2S} \log(l_S) + \alpha_{3S} \log(k)$$

Constraints

Transitions

$$c_S = h_S w_S$$

$$\hat{x} = (\hat{w}_1, \hat{w}_2, \emptyset, M, k)$$

$$l_S + h_S = 1$$

Married, Mature Child

$$x = \{w_1, w_2, \theta, M, k\}:$$

Married, Mature Child

$$x = \{w_1, w_2, \theta, M, k\}:$$

$$V_s(x, \zeta, \epsilon_\theta) = \max_{h_s | h_{3-s}} \left\{ u_s(c_s, l_s, k) + \theta + \epsilon_\theta + \zeta + \beta \mathbb{E}_{\hat{\zeta}, \hat{\epsilon}_\theta, \hat{x} | x} \max_{d_s | d_{3-s}} V_s(\hat{x}, \hat{\zeta}, \hat{\epsilon}_\theta) \right\}$$

$$u_s(c_s, l_s, k) = \alpha_{1s} \log(c_s) + \alpha_{2s} \log(l_s) + \alpha_{3s} \log(k)$$

Married, Mature Child

$$x = \{w_1, w_2, \theta, M, k\}:$$

$$V_s(x, \zeta, \epsilon_\theta) = \max_{h_s | h_{3-s}} \left\{ u_s(c_s, l_s, k) + \theta + \epsilon_\theta + \zeta + \beta \mathbb{E}_{\hat{\zeta}, \hat{\epsilon}_\theta, \hat{x} | x} \max_{d_s | d_{3-s}} V_s(\hat{x}, \hat{\zeta}, \hat{\epsilon}_\theta) \right\}$$

$$u_s(c_s, l_s, k) = \alpha_{1s} \log(c_s) + \alpha_{2s} \log(l_s) + \alpha_{3s} \log(k)$$

Constraints

Transitions

$$d_s \in \{0, 1\}$$

$$c_s = w_1 h_1 + h_2 w_2$$

$$l_s + h_s = 1$$

$$\hat{x} = (\hat{w}_1, \hat{w}_2, \tilde{\theta}, M, k)$$

$$\tilde{\theta} = \begin{cases} \hat{\theta} & \text{if } \mathbf{d}(d_1, d_2) = 0 \\ \emptyset & \text{if } \mathbf{d}(d_1, d_2) = 1 \end{cases}$$

Divorce Standards

Unilateral:

$$\mathbf{d}(d_1, d_2) = \mathbf{1}_{\{d_1+d_2>0\}} \quad (6)$$

Bilateral:

$$\mathbf{d}(d_1, d_2) = d_1 d_2 \quad (7)$$

Assume unilateral unless stated otherwise.

Divorced, Child Age $a < M$

With developing child, $x = \{w_1, w_2, \emptyset, a, k\}$. Divorce parameters:
 $(\pi, \bar{\tau})$

Divorced, Child Age $a < M$

With developing child, $x = \{w_1, w_2, \emptyset, a, k\}$. Divorce parameters:
 $(\pi, \bar{\tau})$

$$V_s(x, \zeta) = \max_{h_s, \tau_s | h_{3-s}, \tau_{3-s}} \left\{ u_s(c_s, l_s, k) + \zeta + \beta \mathbb{E}_{\hat{\zeta}, \hat{x} | x} V_s(\hat{x}, \hat{\zeta}) \right\}$$

Divorced, Child Age $a < M$

With developing child, $x = \{w_1, w_2, \emptyset, a, k\}$. Divorce parameters:
 $(\pi, \bar{\tau})$

$$V_s(x, \zeta) = \max_{h_s, \tau_s | h_{3-s}, \tau_{3-s}} \left\{ u_s(c_s, l_s, k) + \zeta + \beta \mathbb{E}_{\hat{\zeta}, \hat{x} | x} V_s(\hat{x}, \hat{\zeta}) \right\}$$

Constraints

Transitions

$$c_1 = (1 - \pi)w_1 h_1 \quad \hat{x} = (\hat{w}_1, \hat{w}_2, \emptyset, a + 1, \hat{k})$$

$$c_2 = \pi w_1 h_1 + h_2 w_2 \quad \hat{k} = \psi_{a,d} \tau_1^{\delta_{1,a}} \tau_2^{\delta_{2,a}} k^{\delta_{3,a}}$$

$$l_s + h_s + \tau_s = 1$$

$$\tau_1 \leq \bar{\tau}$$

$$\tau_2 \leq 1 - \bar{\tau}$$

Married, Child age $a < M$

$$x = \{w_1, w_2, \theta, a, k\} :$$

Married, Child age $a < M$

$$x = \{w_1, w_2, \theta, a, k\} :$$

$$V_s(x, \zeta, \epsilon_\theta) = \max_{h_s, \tau_s | h_{3-s}, \tau_{3-s}} \left\{ u_s(c_s, l_s, k) + \theta + \epsilon_\theta + \zeta + \beta \mathbb{E}_{\hat{\zeta}, \hat{\epsilon}_\theta, \hat{x} | x} \max_{d_s | d_{3-s}} V_s(\hat{x}, \hat{\zeta}, \hat{\epsilon}_\theta) \right\}$$

Married, Child age $a < M$

$$x = \{w_1, w_2, \theta, a, k\} :$$

$$V_s(x, \zeta, \epsilon_\theta) = \max_{h_s, \tau_s | h_{3-s}, \tau_{3-s}} \left\{ u_s(c_s, l_s, k) + \theta + \epsilon_\theta + \zeta + \beta \mathbb{E}_{\hat{\zeta}, \hat{\epsilon}_\theta, \hat{x} | x} \max_{d_s | d_{3-s}} V_s(\hat{x}, \hat{\zeta}, \hat{\epsilon}_\theta) \right\}$$

Constraints

Transitions

$$\begin{array}{l}
 c_s = w_1 h_1 + w_2 h_2 \\
 l_s + h_s + \tau_s = 1
 \end{array}
 \quad
 \tilde{\theta} = \begin{cases} \hat{\theta} & \text{if } \mathbf{d}(d_1, d_2) = 1 \\ \emptyset & \text{if } \mathbf{d}(d_1, d_2) = 0 \end{cases}$$

$$\hat{k} = \psi_a(\theta) \tau_1^{\delta_{1,a}} \tau_2^{\delta_{2,a}} k^{\delta_{3,a}}$$

Married, No Child

$$x = \{w_1, w_2, \theta, \emptyset, \emptyset\}:$$

Married, No Child

$$x = \{w_1, w_2, \theta, \emptyset, \emptyset\}:$$

$$V_s(x, \zeta, \epsilon_\theta) = \max_{h_s, |h_{3-s}} \left\{ u_s(c_s, l_s) + \theta + \epsilon_\theta + \beta \mathbb{E}_{\zeta} \max_{f_s} \mathbb{E}_{\hat{\epsilon}_\theta, \hat{x}|x} \max_{d_s | d_{3-s}} V_s(\hat{x}, \hat{\zeta}, \hat{\epsilon}_\theta) \right\}$$

Married, No Child

$$x = \{w_1, w_2, \theta, \emptyset, \emptyset\}:$$

$$V_s(x, \zeta, \epsilon_\theta) = \max_{h_s, |h_{3-s}} \left\{ u_s(c_s, l_s) + \theta + \epsilon_\theta + \beta \mathbb{E}_{\zeta} \max_{f_s} \mathbb{E}_{\hat{\epsilon}_\theta, \hat{x}|x} \max_{d_s | d_{3-s}} V_s(\hat{x}, \hat{\zeta}, \hat{\epsilon}_\theta) \right\}$$

Constraints

$$c_s = w_1 h_1 + w_2 h_2$$

$$l_s + h_s + \tau_s = 1$$

Transitions

$$\hat{x} = (\hat{w}_1, \hat{w}_2, \tilde{\theta}, \hat{a}, \hat{k})$$

$$\tilde{\theta} = \begin{cases} \hat{\theta} & \text{if } \mathbf{d}(d_1, d_2) = 1 \\ \emptyset & \text{if } \mathbf{d}(d_1, d_2) = 0 \end{cases}$$

$$(\hat{a}, \hat{k}) = \begin{cases} (\emptyset, \emptyset) & \text{if } f_1 f_2 = 0 \\ (0, k_0) & \text{if } f_1 f_2 = 1 \end{cases}$$

Markov Perfect Equilibrium

An MPE in this model:

Markov Perfect Equilibrium

An MPE in this model:

- ▶ A collection of policy functions $\langle d_s, h_s, \tau_s, f_s \rangle_{s=1,2}$, and
- ▶ A pair of value functions $\langle V_1, V_2 \rangle$, such that

Markov Perfect Equilibrium

An MPE in this model:

- ▶ A collection of policy functions $\langle d_s, h_s, \tau_s, f_s \rangle_{s=1,2}$, and
- ▶ A pair of value functions $\langle V_1, V_2 \rangle$, such that
- ▶ Together, they solve the dynamic program sketched above, *taking as given* the policies of other spouse.

Solution Properties 1

We show that value functions are additively separable in $\log(k)$:

Solution Properties 1

We show that value functions are additively separable in $\log(k)$:

$$V_s(w_1, w_2, \theta, a, k, \epsilon_\theta, \zeta) = \alpha_{V,s,a} \log(k) + \mathcal{V}(w_1, w_2, \theta, a, \epsilon_\theta, \zeta) \quad (8)$$

$$\alpha_{V,s,a} = \alpha_{s3} + \beta \delta_{3,a} \alpha_{V,s,a+1} \quad (9)$$

$$\alpha_{V,s,17} = (1 - \beta)^{-1} \alpha_{s3} \quad (10)$$

Solution Properties 2

- ▶ Divorce and fertility policies are threshold policies in ϵ_θ and ζ , e.g.:

$$d_s(w_1, w_2, \theta, \epsilon_\theta) = \mathbf{1} \{ \epsilon_\theta < \mathcal{V}(w_1, w_2, \emptyset, a) - \mathcal{V}(w_1, w_2, \theta, a) \} \quad (11)$$

- ▶ Analytic solutions for (h_s, τ_s) in each state. Example $x = (w_1, w_2, \theta, k, a)$:

$$h_1 = \max \left\{ \frac{\alpha_{11}}{\alpha_{11} + \alpha_{12} + \delta_{1,a}\beta\alpha_{V,1,a+1}} - \frac{\alpha_{12} + \delta_{1,a}\beta\alpha_{V,1,a+1}}{\alpha_{11} + \alpha_{12} + \delta_{1,a}\beta\alpha_{V,1,a+1}} \frac{h_2 w_2}{w_1}, 0 \right\} \quad (12)$$

$$\tau_1 = \frac{\delta_{1,a}\beta\alpha_{V,1,a+1}}{\alpha_{12} + \delta_{1,a}\beta\alpha_{V,1,a+1}} (1 - h_1) \quad (13)$$

Method

Using Method of Simulated Moments:

Method

Using Method of Simulated Moments:

- ▶ Moments on time to divorce and time to first birth
- ▶ Distribution of and growth in wages
- ▶ Labor supply
- ▶ Time investment
- ▶ Distribution of and growth in test scores (WJ-LW).
- ▶ Time \times score interaction
- ▶ 75 moments (42 parameters)

Some particulars

- ▶ Heterogeneity:
 - ▶ 2 wage types (each spouse)
 - ▶ 2 marriage types
- ▶ Production: $\delta_{s,a} = \exp(\gamma_{0,s} + \gamma_{a,s}a)$
- ▶ Test score $\sim B(58, p)$, $p = k/(1 + k)$
- ▶ $\pi = 0.15$, $\bar{\tau} = 0.4$

Production Parameters

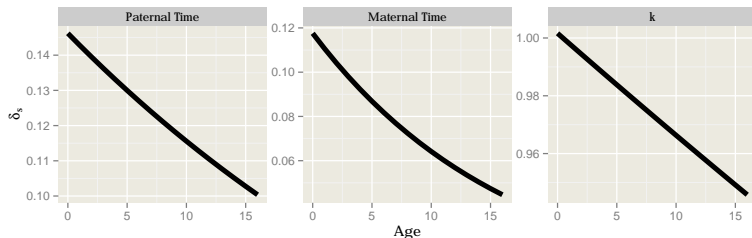


Figure : Estimates of Cobb-Douglas Shares: $\delta_1, \delta_2, \delta_3$

Production Parameters

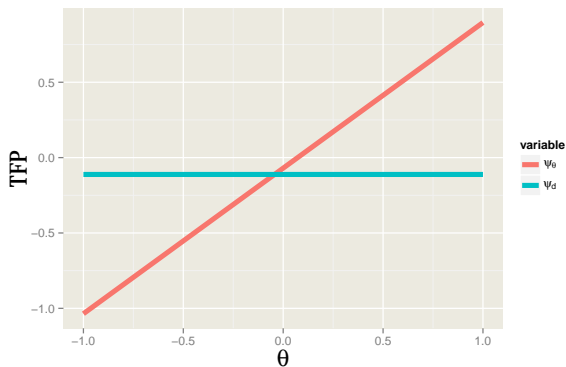


Figure : Estimates of TFP Parameters: ψ_θ, ψ_d

Investment Policies

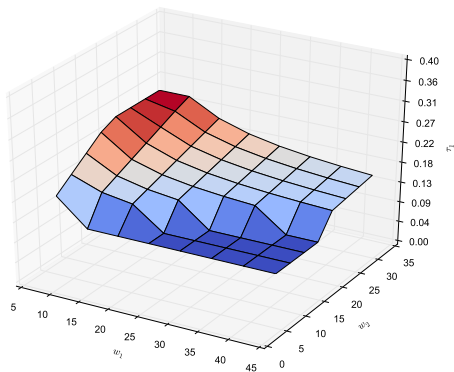


Figure : Father's Time Investment, $a = 0$

Divorce Policies

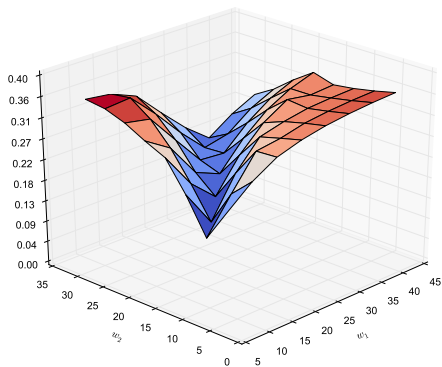


Figure : Divorce Probability, $a = 0, \theta = -1$

Model: Divorce Patterns

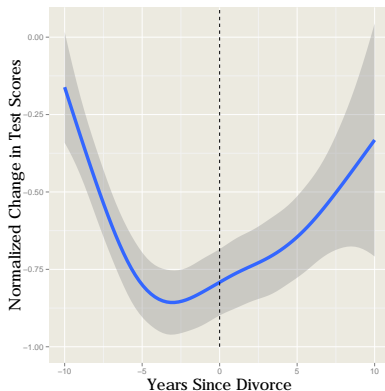


Figure : Normalized Test Score Growth vs Years to Divorce

Model: Divorce Patterns

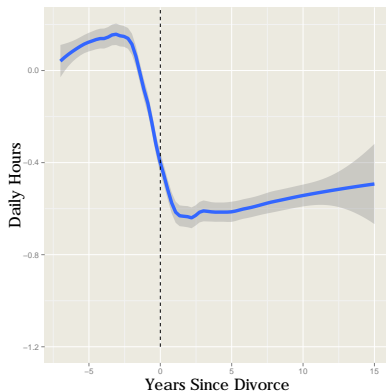


Figure : Normalized Paternal Time Input vs Years to Divorce

Model: Divorce Patterns

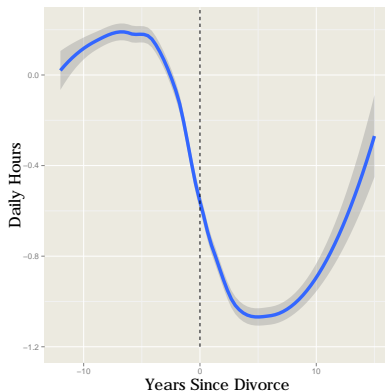


Figure : Normalized Maternal Time Input vs Years to Divorce

Playing with Divorce Standards

Playing with Divorce Standards

	Unilateral (Baseline)	Bilateral	No Divorce
Fertility Rate	0.5463	0.5733	0.5581
Divorce Rate	0.1190	0.0655	0.0000
Δ Test Scores	0.0000	-0.1007	-0.1054
% CEV Father	1.0000	1.0139	0.9323
% CEV Mother	1.0000	1.0428	1.0168

Table : Divorce Standard Experiment

Child Support Obligations

Child Support Obligations

	$\pi = 0.15$	$\pi = 0.3$	$\pi = 0.45$
Fertility Rate	0.5469	0.5508	0.5496
Divorce Rate	0.1204	0.1212	0.1214
Δ Test Scores	0.0000	-0.0092	-0.0167
% CEV Father	1.0000	1.0140	1.0216
% CEV Mother	1.0000	1.0074	1.0138

Table : Child Support Experiment

An Important Lesson

- ▶ These policies had opposite effect on divorce rates.
- ▶ Yet both had negative impact on child outcomes.
- ▶ \Rightarrow policies cannot be analyzed based on divorce impacts.
- ▶ Model proves useful.

Next Steps

- ▶ Enrich policy framework in model.
- ▶ Look at effect custody arrangements.
- ▶ Look for optimal policy.